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08/839,873 04/17/97 THOMANN

M 303.012US2

LM01/1116
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MINNEAPOLIS MN 55402-2833

EXAMINER

CHASE, S	ART UNIT	PAPER NUMBER
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2784
 DATE MAILED:

7
11/16/98

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No. 08/839,873	Applicant(s) Thomann, Mark et al.
Examiner Shelly A Chase	Group Art Unit 2786

 Responsive to communication(s) filed on Apr 17, 1997 This action is **FINAL**. Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims Claim(s) 8 and 11-24 is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

 Claim(s) _____ is/are allowed. Claim(s) 8 and 11-24 is/are rejected. Claim(s) _____ is/are objected to. Claims _____ are subject to restriction or election requirement.**Application Papers** See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948. The drawing(s) filed on _____ is/are objected to by the Examiner. The proposed drawing correction, filed on _____ is approved disapproved. The specification is objected to by the Examiner. The oath or declaration is objected to by the Examiner.**Priority under 35 U.S.C. § 119** Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

All Some* None of the CERTIFIED copies of the priority documents have been received.

received in Application No. (Series Code/Serial Number) _____.

received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

 Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).**Attachment(s)** Notice of References Cited, PTO-892 Information Disclosure Statement(s), PTO-1449, Paper No(s). 2 Interview Summary, PTO-413 Notice of Draftsperson's Patent Drawing Review, PTO-948 Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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DETAILED ACTION

1. Claims 8 and 11 to 24 are presented for examination.

Information Disclosure Statement

2. The information disclosure statement filed 7-22-97 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each U.S. and foreign patent; each publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. The 1449 has been placed in the application file along with the US Patents, but the information referred to therein other than the US Patents has not been considered.

Drawings

3. The drawings are objected to because of the problems addressed in the attached PTO-948. Correction is required.

Claim Rejections - 35 U.S.C. § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who

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has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

5. Claims 15 to 24 are rejected under 35 U.S.C. 102(e) as being anticipated by Zook et al. (US Patent 5,602,857).

Zook teaches the claimed invention (claim 15) as claimed including a **device for cyclical redundancy check error generation, the apparatus comprising:**

- (a) an error check module programmable for generating and comparing error check words (e.g., see col. 5, lines 56 to 64);
- (b) a first data bus for transferring data from an edit buffer to a first data port as taught as a host control bus (e.g., see col. 5, lines 26 to 38);
- (c) a second data bus for transferring data from the first data port to the error check module as taught as a correction control bus (e.g., see col. 5, lines 26 to 38);
- (d) a third data bus for transferring an error check word between the error check module and the edit buffer as taught as a device control bus (e.g., see col. 5, lines 26 to 38); and,
- (e) a control module for programming the first, second, and third data busses and error check module (e.g., see col. 5, lines 20 to 30). As to the further limitations of the claim that the data buses are parallel and programmable, it is inherently that the data buses as taught by Zook are as claimed.

As per claim 16, Zook teaches a first error processing mode causes the control module to program the second data bus to transfer data from the edit buffer to the error check module (e.g., see col. 11, lines 28 to 40).

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As per claim 17, Zook teaches a second error processing mode causes the control module to program the second data bus to transfer data from the first data port to the edit buffer (e.g., see col. 6, lines 35 to 56).

As per claim 18, Zook does not specifically teach a third error processing mode causes the control module to program the first data bus to transfer data from the edit buffer to the data port, however provides adequate support (e.g., see col. 15, lines 13 to 26).

As per claim 19, Zook teaches a buffer with a read and write data portion (e.g., see col. 7, lines 37 to 50).

As per claim 20, Zook discloses a device which stores a header word in one of the data portions (e.g., see col. 19, lines 12 to 25).

As per claim 21, a second data protocol stores header data in one of the data portions and prepend and postpend data in the other data portion is well within the scope of the invention as taught by Zook.

As per claim 22, Zook teaches the third data protocol stores raw data in both data portions (e.g., see col. 7, lines 37 to 49).

As per claim 23, Zook discloses the error check module generates and compares cyclical redundancy check words (e.g., see col. 8, lines 36 to 55).

As per claim 24, the control module programs a fourth parallel data bus to transfer data between a second data port and the edit buffer is well within the scope of the invention as taught by Zook.

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Claim Rejections - 35 U.S.C. § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 8, 11 to 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zook et al. In view of Peterson et al. (US Patent 5,241,546).

Zook teaches the claimed invention (**claims 8 and 14**) substantially as claimed including a **method for cyclical redundancy check error generation, the method** comprising:
a system having a cycle redundancy check generator and a data buffer connected to a plurality of data bus lines (e.g., see col. 5, lines 17 to 24 and Fig. 1). Zook does not specifically teach a data latch, however, Peterson teaches a method step for error correction using a data latch (e.g., see col. 17, line 12 to col. 18, line 55). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Zook with that of Peterson because retaining the data in latches allows the manipulation of the data to take place in a timely, sequence manner.

As per claim 11, Zook does not teach method steps of isolating the data latched from the plurality of data bus lines, however, Peterson teaches method steps for isolating the data latched

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(e.g., see col. 19, lines 23 to 47). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Zook with that of Peterson because isolating the data will aid in fast and more effective way to correct the data.

As per claim 12, precharging the cyclical redundancy check generator to a second level is well within the scope of the invention as taught by Zook.

As per claim 13, Zook does not teach generating an error check word from the data latched in the data latch however, Peterson teaches error correction from data latched in a data latch (e.g., see col. 18, lines 49 to 65). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Zook with that of Peterson because utilizing latched data for error correction aid in correcting errors without interruption. Thus, it is a form of effectively correcting errors.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shelly A Chase whose telephone number is (703) 308-7246. The examiner can normally be reached on Monday - Friday from 8:00 am to 4:30 pm .

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Reba Elmore, can be reached on (703) 305-9706.

Any response to this action should be mailed to:

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or faxed to:

(703) 308-9051, (for formal communications intended for entry)

Or:

(703) 305-9724 (for informal or draft communications, please label
"PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive,
Arlington, VA., Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding
should be directed to the Group receptionist whose telephone number is (703) 305-9600.



Shelly A Chase
November 9, 1998



REBA I. ELMORE
SUPERVISORY PATENT EXAMINER
GROUP 2700